ORIGINAL

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FIELD NOTES

OF THE

DEPENDENT RESURVEY OF A PORTION OF THE NORTH BOUNDARY

OF

THE TOHONO O'ODHAM NATION RESERVATION

(PORTIONS OF THE FIRST GUIDE MERIDIAN EAST [WEST BOUNDARY],

THE EAST BOUNDARY AND THE SUBDIVISIONAL LINES)

TOWNSHIP 7 SOUTH, RANGE 5 EAST,

OF THE GILA AND SALT RIVER MERIDIAN,

IN THE STATE OF ARIZONA.

EXECUTED BY

Blas J. Urena, Cadastral Surveyor

Under Special Instructions dated December 8, 2016, approved December 8, 2016, which provided for the surveys included under Group No. 1165, and assignment instructions dated December 8, 2016.

Survey commenced December 27, 2016

Survey completed February 1, 2017

INDEX DIAGRAM

TOWNSHIP 7 NORTH RANGE 5 EAST GILA & SALT RIVER MERIDIAN, ARIZONA

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Tp. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

The following field notes describe the dependent resurvey of a portion of the North Boundary of the Tohono O'odham Nation Reservation (portions of the First Guide Meridian East [west boundary], the East Boundary and the subdivisional lines) Township 7 South, Range 5 East, Gila and Salt River Meridian, Arizona.

The history of surveys pertaining to this survey is as follows:

W. H. Thorn, U. S. Surveyor, and W. K. Kierulff, U. S. Transitman, resurveyed the First Guide Meridian East (West Boundary), Township 7 South, Range 5 East, (portion of the Boundaries of the Tohono O'odham Nation Reservation), in 1915, book 2891. Otis O. Gould, U. S. Transitman, resurveyed the East Boundary and the subdivisional lines of Township 7 South, Range 5 East, (portions of the Boundaries of the Tohono O'odham Nation Reservation), in 1928, book 3843. Roger F. Wilson, U. S. Transitman, remonumented the corner of sections 19, 24, 25, and 30 of Township 7 South, Ranges 5 and 6 East, in 1936, book X3841.

The survey was executed in accordance with the specifications as set forth in the $\underline{\text{Manual of Surveying Instructions}}$, 2009, and the Special Instructions dated December 8, 2016, for Group Number 1165, Arizona.

The true meridian direction and length of all lines were determined by static, real time kinematic Global Navigation Satellite System observations using Trimble Navigation R8-3 model receivers.

Preliminary to the resurvey, the lines of the prior surveys were retraced and search was made for all corners and other calls of record. Identified corners were remonumented in their original positions. Lost corners were reestablished and remonumented at proportionate positions based on the official record. The retracement data were thoroughly verified and only the true line field notes are given herein.

The survey was executed at the request of Bryan Bowker, Acting Regional Director, Bureau of Indian Affairs, Western Regional Office, in support of the Tohono O'Odham Nation (TON) Reservation's boundary fencing project.

Geodetic control was derived from Global Navigation Satellite System (GNSS) static observations post processed by National Geodetic Survey, Online Positioning User Service (OPUS), utilizing Continuously Operating Reference Stations DL3063 AZTP TEMPE CORS ARP, DN4496 AZUP USERY MOUNTAIN PK CORS ARP and AJ6820 SRP1 SALT RIVER PROJEC CORS ARP. The NAD 83 (CORS2011) (EPOCH: 2010.0000), geographic position of the corner of the Townships 7 and 8 South, Ranges 5 and 6 East, is as follows:

Latitude: 32°45'46.931" N. Longitude: 111°46'28.155" W.

Tp. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

The NAD 83 (CORS2011) (EPOCH: 2010.0000), geographic position of the corner of sections 19 and 30 only of Township 7 South, Range 5 East, on the west boundary of the Township, is as follows:

Latitude: 32°47'31.313" N. Longitude: 111°52'39.327" W.

The mean magnetic declination is 10 1/4° E.

Dependent Resurvey of a portion of the First Guide Meridian East (West Boundary), T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

Restoring the resurvey executed by W. H. Thorn and W. K. Kierulff, in 1915

Beginning at the SW cor. of T. 7 S., R. 5 E., within the TON Reservation, monumented with an iron post, 3 ins. diam., firmly set, projecting 13 ins. above ground, with brass cap mkd.

N. 0°04' W., on the W. bdy. of sec. 31.

Over nearly level terrain, through scattered undergrowth.

26.36

Point for the SE closing cor. of T. 7 S., R. 4 E., at intersection with the First Guide Meridian East, as described in the field notes of T. 7 S., R. 4 E., executed concurrently under this same group.

From this cor. point, the 1915 closing cor. of T. 7 S., R. 4 E., bears S. 89°54' E., 0.8 lk. dist., monumented with an iron post, 3 ins. diam., firmly set, projecting 11 ins. above ground, with brass cap mkd.

Dependent Resurvey of a portion of the First Guide Meridian East(West Boundary),

T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

From this same cor. point, the 1/4 sec. cor. of sec. 36, T. 7 S., R. 4 E., (unsurveyed sec. 1, T. 8 S., R. 4 E., being within the TON Reservation), bears N. 89°54' W., 120.885 chs. dist., monumented with an iron post, 1 in. diam., firmly set, projecting 4 ins. above ground, with brass cap mkd. T7S R4E S36 1/4 PIR 2016 1915.

from the 1915 closing cor.

A brass cap, 4 ins. diam., flush, in concrete cylinder, 12 ins. diam., flush with the surface of the ground for a reference monument, bears N. 77°52' E., 4.55 ft. dist. mkd. U. S. DEPARMENT OF THE INTERIOR B.M. BUREAU OF RECLAMATION UNLAWFUL TO DISTURB 7 - 5 - 143 ELEV FT. ABOVE MEAN SEA LEVEL 1983, with a steel fence post, 3.8 lks. E. of brass cap.

From the 1915 closing cor., a fence corner, barbed wire, 4 strand, bears N. 18°31' E., 1 lk., with fences extending S. 27°13' E., S. 89°36' W. and N. 0°14' W.

Thence continuing along the W. bdy. of the TON Reservation, on/or alongside a barbed wire fence, 4 strand.

40.15

The 1/4 sec. cor. of sec. 31 only, T. 7 S., R. 5 E., monumented with an iron post, 1 in. diam., firmly set, projecting 10 ins. above ground, with brass cap mkd.

This cor. is located alongside the same barbed wire fence, 4 strand, bears S. 0°15' E. and N. 0°15' W.

N. 0°04' W., beginning new measurement.

38.60 From this point a fence corner, on the same barbed wire fence, bears West, 0.6 lks. with fences extending, N. 0°02' E., S. 0°7' E. and S. 31°11' W.

40.225 The cor. of secs. 30 and 31 only, T. 7 S., R. 5 E., monumented with an iron post, 3 ins. diam., firmly set, projecting 13 ins. above ground, with brass cap mkd.

Dependent Resurvey of a portion of the First Guide Meridian East(West Boundary),

T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

T7S R5E S 30

1915

Add the marks 2016 to the brass cap.

From this cor. the same barbed wire fence bears West, 0.6 lks., bears N. 0°02' E. and S. 0°02' W.

from which

- A brass cap, 4 ins. diam., flush, in concrete cylinder, 14 ins. diam., projecting 2 ins. above ground for a reference monument, bears S. 20°00' E., 4.0 ft. dist. mkd. U. S. DEPARMENT OF THE INTERIOR B.M. BUREAU OF RECLAMATION UNLAWFUL TO DISTURB 7 5 142 ELEV FT . ABOVE MEAN SEA LEVEL 1983.
- A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., projecting 2 ins. above ground for a reference monument, bears S. 46°34' E., 88.0 ft. dist. mkd. CORPS OF ENGINEERS U.S. ARMY SURVEY MARK W 51 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. National Geodetic Survey (NGS) Permanent Identifier (PID) CZ2359. With two reference marks, a punched iron pin, 5/8 in. diam., flush in concrete, E. arm, bears N. 89°15' E., 29.0 ft. (8.84 m.) dist., PID CH5674 and a punched iron pin, flush in concrete, S. arm, bears S. 0°43' E., 29.0 ft. (8.84 m.) dist., PID CH5675.

N. 0°03' W., on the W. bdy. of sec. 30 (N. bdy. of the TON Reservation).

Over nearly level terrain, through scattered undergrowth and on/or alongside the same barbed wire fence.

25.90

The closing cor. of secs. 25 and 36, T. 7 S., R. 4 E., monumented with an iron post, 2 ins. diam., firmly set, projecting 1 in. above ground, with brass cap mkd.

Dependent Resurvey of a portion of the First Guide Meridian East (West Boundary),

T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

1915

Add the marks 2016 to the brass cap.

The cor. is located alongside the same barbed wire fence, bears S. 0°07' E. and N. 0°07' W.

From this cor. a 60d nail with a washer, bears Westerly, 2 ft. dist.

40.11

The 1/4 sec. cor. of sec. 30 only, T. 7 S., R. 5 E., monumented with an iron post, 1 in. diam., firmly set, projecting 2 ins. above ground, with brass cap, mkd.



Remark the brass cap to read

The cor. is located alongside the same barbed wire fence, bears S. 0°11' E. and N. 0°11' W.

N. 0°04' W., beginning new measurement.

40.126

Point for the cor. of secs. 19 and 30 only, T. 7 S., R. 5 E., at proportionate dist., by the method of irregular boundary adjustment, there is no remaining evidence of the 1915 monument.

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, underpinned with an alum. rod, 36 ins. long, 3/4 in. diam., 36 ins. in the ground, with brass cap mkd.

Dependent Resurvey of a portion of the First Guide Meridian East(West Boundary),

T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

CHAINS

T7S

R5E

S 19

S 30

T O N

from which

A rebar, 1/2 ins. diam., firmly set, projecting 4 ins. above ground for a reference monument, bears N. 0°31' W., 174.85 ft. dist. with brass tag mkd. RLS 15933.

2017

A rebar, 1/2 ins. diam., firmly set, projecting 2 ins. above ground for a reference monument, bears N. 0°32' W., 175.52 ft. dist. with a yellow plastic cap, 1 in. diam., mkd. T. ROPE . LS 21081.

Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Set a steel fence post, S. of cor.

From this cor., a fence corner on the same barbed wire fence, bears N. $72^{\circ}44^{\circ}$ W., 1.2 lks., with down fences extending S. $89^{\circ}56^{\circ}$ E. and S. $0^{\circ}12^{\circ}$ E., and 6 ins. above the concrete footing of the same fence corner. Removed some of the tailing from the constructions of the irrigation canal around the corner.

From this same cor. point, the 1/4 sec. cor. of sec. 19 only, T. 7 S., R. 5 E., bears N. 0°13' W., 40.306 chs. dist., monumented with an iron post, 1 in. diam., firmly set, 6 ins. below the surface of Midway road, a graded road, 28 ft. wide, bears N. and S., with brass cap mkd.

1/4 S 19

1915

Remark the brass cap to read

T7S R5E 1/4 S 19 2017 1915

CHAINS

Restoring the survey executed by Otis O. Gould, in 1928

From the cor. of Tps. 7 and 8 S., Rs. 5 and 6 E., monumented with an iron post, 3 ins. diam., firmly set, projecting 11 ins. above ground, with brass cap mkd.

1915

Add the marks 2017 to the brass cap.

From this cor., a fence corner bears N. 0°38' E. 2.2 lks., barbed wire, 4 strand, with a fence extending N. 0°47' E. and a down fence extending S. 89°10' E.

from which

The top SW corner of a concrete pad, 5.6 ft. sq., bears N. $57^{\circ}23'30''$ E., 82.9 ft. dist.

A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., 2 ins. below the surface of the ground for a reference monument, bears S. 30°56' W., 194.5 ft. dist. mkd. CORPS OF ENGINEERS - U.S. ARMY SURVEY MARK AC 52 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2308.

N. 0°01' E., bet. secs. 31 and 36, along the N. bdy. of the TON Reservation.

Over nearly level terrain, through scattering undergrowth and on/or alongside the same barbed wire fence.

20.06

A local monument, established by persons unknown, monumented with a rebar, 1/2 in. diam., firmly set, projecting 1 in. above ground, with a rebar 1/2 in diam., firmly set, projecting 33 ins. above ground, W. of cor.

From this local monument the same barbed wire fence bears W., 1 lk., bears N. 0°05' E. and S. 0°05' W.

CHAINS		
30.105	A local	monu

A local monument, established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 2005, according to Surveys Book 14, Page 074, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam. firmly set, projecting 3 ins. above ground, with a plastic yellow cap, 1 in. diam., mkd. LAND MARK 27753.

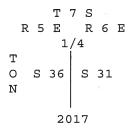
From this local monument the same barbed wire fence bears E., 0.5 lks., bears S. 0°02' E. and N. 0°02' W.

40.12

The 1/4 sec. cor. of secs. 31 and 36, monumented with an iron post, 1 in. diam., filled with concrete, firmly set, 4 ins. below the surface of the ground, and alongside a portion of a decayed wood post.

At the corner point

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 27 ins. in the ground, directly over a portion of the iron post, with brass cap mkd.



Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Deposit pieces of the iron post, totaling 18 ins. in length, inside the stainless steel post.

Set a steel fence post, W. of corner.

From this cor., the same barbed wire fence, bears E., 1 lk., bears N. 0°13' E. and S. 0°13' W., and from this same cor., a corner on the same fence bears S. 1°33' E., 35 lks., with fences extending N. 0°13' E., N. 86°23' E. and S. 0°37' E.

From this same cor. a rebar, 18 ins. long, 1/2 in. diam., loosely set, 1 in. below the surface of the ground, with an aluminum cap, 2 ins. diam., mkd. LAND MARK 27753, bears N. 11°53' E., 1.1 lks. dist., established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 1998, according to Surveys Book 3, Page 143, on file at Pinal County Recorder's Office, I removed this rebar, and thence reset in the same place, and it is now projecting 1 in. above the ground. This position was not utilized in the course of this resurvey.

N. 0°01' E., beginning new measurement.

CHAINS	
20.08	From this point a local monument, bears E., 1 lk., established by persons unknown, monumented a rebar, 1/2 in. diam., firmly set, projecting 1 in. above ground, with a PVC pipe 1 1/2 ins. diam., projecting approximately 30 ins., W. of rebar.
	From the local monument the same barbed wire fence, bears W., 5 lks.,3 strand, bears S. 1°21' E. and N. 1°21' W.

The cor. of secs. 25, 30, 31, and 36, monumented with an iron post, 36 ins. long, 2 ins. diam., filled with concrete, firmly set, 4 ins. below the surface of the ground and bent NE, with brass cap mkd.

1928

At the corner point

40.14

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 28 ins. in the ground, with brass cap mkd.

2017

Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Bury the iron post, horizontally, alongside of the stainless steel post.

Set a steel fence post, ${\tt N.}$ of cor.

From this cor. the same barbed wire fence, bears W., 0.8 lks., bears N. and S., and from this same cor. a fence corner, bears N. $88^{\circ}56'$ E, 50.7 lks., barbed wire, 1 strand, with fences extending N. $0^{\circ}9'$ E. and S. $89^{\circ}32'$ E.

The cor. is also located NW of the intersection of Thornton Road, a dirt road, 20 ft. wide, and Houser Road, a dirt road.

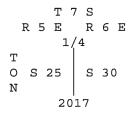
from which

	T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona
CHAINS	
	A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., flush with the surface of the ground for a reference monument, bears S. 71°47' W., 296.4 ft. dist. mkd. CORPS OF ENGINEERS - U.S. ARMY SURVEY MARK AC 51 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2311.
	N. 0°01' E., bet. secs. 25 and 30, along the N. bdy. of TON Reservation.
	Over nearly level terrain, through scattering undergrowth and on/or alongside the same barbed wire fence.
11.942	A local monument, established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 1999, according to Surveys Book 3, Page 126, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam. firmly set, projecting 1 in. above ground, with a plastic yellow cap, 1 in. diam., mkd. LS . 27753.
	This local monument is located alongside the same barbed wire fence, 1 stand and down, bears S. 0°04' E. and N. 0°04' W.
	From this local monument, set a rebar, 24 ins. long, 5/8 in. diam., firmly set, flush with the surface of the ground, bears N. 29°18' W., 99.2 lks. dist.
20.062	A local monument, established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 1999, according to Surveys Book 3, Page 126, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam. firmly set, flush with the surface of the ground, with a plastic yellow cap, 1 in. diam., mkd. 27 3, with a steel fence post, projecting approximately 2 ft. above ground and W. of the rebar.
_	From this local monument, the same barbed wire fence bears W., 1 lk., 2 strand, bears N. 0°01' E. and S. 0°01' W.
32.088	From this point a local monument, bears W., 0.4 lks., established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 1998, according to Book 2 Surveys, Page 377, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam., firmly set, projecting 1 in. above ground, with a plastic yellow cap, illegible, with a steel fence post, projecting approximately 18 ins. above ground, W. of rebar.
	From this local monument, the same barbed wire fence, bears W., 0.5 lks., 4 strand, bears N. 0°01' E. and S. 0°01' W.

The 1/4 sec. cor. of secs. 25 and 30, monumented with an iron post, 36 ins. long, 1 in. diam., filled with concrete, firmly set, 2 ins. below the surface of the ground and bent E., witnessed by an embedded mound of stone, 2 ft. base, W. of cor., and a steel fence post, S. of cor.

At the corner point

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, with brass cap mkd.



Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Bury the iron post, horizontally, alongside of the stainless steel post.

Reset the steel fence post, N. of cor.

From this cor. the same barbed wire fence bears W., 0.5 lks., bears S. 0°01' E. and N. 0°01' W., and from this same cor. the terminus of a barbed wire fence bears S. 88°54' E., 51 lks., 1 strand, bears S. 0°02' W.

From this same cor., Thornton Road, a dirt road, 20 ft. wide, bears E., 27 lks., parallels the same barbed wire fence.

N. 0°02' E., beginning new measurement.

A local monument, established by Colin D. Harvey, Arizona R.L.S. No. 42017, in 2005, according to Book 13, Page 049, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam. firmly set, projecting 4 ins. above ground, with a portion of a plastic yellow cap, illegible.

From this local monument the same barbed wire fence, bears W., 0.4 lks., 4 strand, bears N. and S.

11.682

A local monument, established by Michael D. Skroch, Arizona R.L.S. No. 27753, in 1999, according to Book 3 of Surveys, Page 125, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam. firmly set, projecting 4 ins. above ground, with a portion of a plastic yellow cap, illegible, with a PVC pipe, 1 in. diam., projecting 39 ins. above ground, N. of rebar.

Dependent Resurvey of a portion of the East Boundary, T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona

	T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona
CHAINS	
	From this local monument the same barbed wire fence, bears W., 0.4 lks., 2 strand, bears S. 0°03' E. and 4 strand, bears N. 0°03' W.
22.864	A local monument, established by James Loftis, Arizona R.L.S. No. 26404, date unknown, monumented with a rebar, firmly set, projecting 3 ins. above ground, with a plastic yellow cap, 1 ins. diam., mkd. RLS. 26404, with a rebar, 1/4 in. diam., firmly set, projecting 36 ins. above ground, S. of local monument.
	From this local monument the same barbed wire fence, bears W., 1.4 lks., 4 strand, bears S. 0°03' E. and N. 0°03' W.
27.707	A local monument, established by Larry B. Hansen, Arizona R.L.S. No. 17258, in 2000, according to Surveys Book 4, Page 195, on file at Pinal County Recorder's Office, monumented with a rebar, 5/8 in. diam., firmly set, projecting 9 ins. above ground, with an aluminum cap, 2 ins. diam., mkd. HANSEN ENGINEERING 520-723-3261 + LS 17258.
	From this local monument the same barbed wire fence, bears W., 2 lks., 4 strand, bears N. 0°41' E. and S. 0°41' W.
35.57	From this point, the same barbed wire fence bears W., 1.5 lks., 4 strand, bears S. 0°03' E. and N. 0°02' W.
37.60	From this point, a fence corner, on the same barbed wire fence, bears W., 1.7 lks., 4 strand, with fences extending S. 0°03' E. and N. 31°48' W.
37.695	From this point, a fence corner, on the same barbed wire fence bears W., 7.6 lks., 4 strand, bears S. 31°48' E. and N. 79°22' W.
37.765	From this point, a cattle guard in the same barbed wire fence bears W., 48 lks., with fences extending S. 79°22' E. and N. 79°22' W.
37.846	From this point, a fence corner, on the same barbed wire fence bears W., 83.6 lks., 4 strand, with fences extending S. 79°22' E. and N. 61°09' W.
40.13	The cor. of secs. 19, 24, 25, and 30, monumented with an iron pipe, 11 ins. long, 1 in. diam., filled with concrete, established by persons unknown, found and accepted by Larry B. Hansen, Arizona R.L.S. No. 17258, in 1999, according to Surveys Book 3, Page 291, on file at Pinal County Recorder's Office, also found and accepted by William G. Hackathorn, Arizona R.L.S. No. 38001, in 2008, according to Book 22 of Surveys at Page 264, on file at Pinal County Recorder's Office. This is accepted as a careful and faithful reestablishment of the original cor.
	At the corner point

CHAINS

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 42 ins. in the ground, with brass cap mkd.

Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Deposit the iron pipe inside the stainless steel post and deposit a coffee can, 4 1/2 ins. long, 4 ins. diam., directly over the brass cap.

from which

- A stainless steel rod, 1/2 ins. diam., firmly set, inside a 6 ins. diam. PVC pipe tube in concrete, 3 ins. below the aluminum capped lid, with rim marked "MAHALO 2006 LS14169", concrete 18 ins. diam., and projecting 3 ins. above the ground for a reference monument, bears N. 4°34' E., 372.7 ft. dist. with a carsonite post marked "SURVEY MARK", E. of monument. NGS PID DK4654.
- A rebar, 1/2 ins. diam., firmly set, flush with the surface of the ground for a reference monument, bears S. 44°31' E., 47.1 ft. dist. with a plastic yellow cap, 1 in. diam., mkd. LAND MARK . 27753, this rebar is located 2.7 lks. E. from a barbed wire fence, 4 strand, bears N. 1°40' E. and S. 1°40' W.
- A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., projecting 3 ins. on the N. edge and flush with the surface of the ground on the S. edge for a reference monument, bears S. 31°37' W., 239.8 ft. dist. mkd. CORPS OF ENGINEERS U.S. ARMY SURVEY MARK AC 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2310.

There is no remaining evidence of the 4 witness corners established in 1928 and remonumented in 1936.

The cor. is located in Thornton Road, a graded dirt road, 25 ft. wide, bears S. and NW.

CHAINS	From the sec. cor., a fence corner bears N. 89°57' E., 49.6 lks., with barbed wire fences, 4 strand, extending S. 88°54' E. and S. 1°40' W.
	Dependent Resurvey of a Portion of the Subdivisional Lines, T. 7 S., R. 5 E., Gila and Salt River Meridian, Arizona
	Restoring the resurvey executed by Otis O. Gould, in 1928
	From the cor. of secs. 19, 24, 25, and 30, on the E. bdy. of the Tp., hereinbefore described.
	N. 89°56' W., bet. secs. 24 and 25, along the N. bdy. of TON Reservation.
	Over gently rolling to nearly level terrain, through scattering undergrowth and scattering mesquite.
0.838	From this point a fence corner bears S., 2.298 chs., with fences, 4 strand barbed wire, extending S. 79°22' E. and N. 61°09' W.
3.694	From this point the same barbed wire fence, bears S., 70.6 lks., 4 strand, bears S. 60°45' E. and N. 60°31' W.
4.95	The same barbed wire fence, bears S. 61°28' E. and N. 61°28' W.
5.043	From this point, a fence corner, on the same barbed wire fence, bears N., 5 lks., with barbed wire fences, 4 strand, extending S. 61°53' E. and N. 89°24' W.
5.86	From this point, the same barbed wire fence, bears N., 5.9 lks., bears S. 89°24' E. and N. 89°24' W.
40.11	The 1/4 sec. cor. of secs. 24 and 25, monumented with an iron post, 1 in. diam., firmly set, 6 ins. below the surface of the ground, with brass cap mkd.
	S 24
	1/4 S 25
	PIR
	1928

CHAINS

Remark the brass cap to read

Found a steel fence post, W. of cor.

Encircle the iron post with a collar of stone.

From this cor., the same barbed wire fence, bears N., 0.3 lks., bears S. $89^{\circ}56'$ E. and N. $89^{\circ}56'$ W.

S. 89°57' W., beginning new measurement.

40.12

The cor. of secs. 23, 24, 25, and 26, monumented with an iron post, 2 ins. diam., firmly set, 4 ins. below the surface of the ground, with brass mkd. T7S R5E S23 S24 S26 S25 P I R 1928, witnessed by a scattered mound of stone, W. of cor.

from which

A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., projecting 1 in. above ground for a reference monument, bears S. 46°01' W., 93.8 ft. dist. mkd. CORPS OF ENGINEERS - U.S. ARMY SURVEY MARK AB 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2319.

Add the marks 2017 to the brass cap.

Rebuild the mound of stone, 2 ft. base, 10 ins. high, W. of cor.

Set a steel fence post, N. of cor.

From this cor., the same barbed wire fence, bears N., 1.7 lks., bears N. $89^{\circ}59'$ E. and S. $89^{\circ}59'$ W.

From the cor. of secs. 23, 24, 25, and 26.

S. 89°54' W., bet. secs. 23 and 26, N. bdy. of TON Reservation.

Over nearly level terrain, through scattering undergrowth and scattering mesquite, on/or alongside the same barbed wire fence.

CHAI	.NS
40	.09

The 1/4 sec. cor. of secs. 23 and 26, monumented with an iron post, 1 in. diam., firmly set, projecting 2 ins. above ground, in a scattered mound of stone, with brass cap mkd.

$$1/4 \frac{S 23}{S 26}$$
P I R

1928

Remark the brass cap to read

from which

A rebar, 5/8 in. diam., firmly set, leaning S., projecting 5 ins. above ground for a reference monument, bears N. 86°50' E., 16.4 ft. dist., set by persons unknown.

Raise a mound of stone, utilizing the stones of the scattered mound, 2 ft. base, 14 ins. high, N. of cor.

The cor. is located alongside the same barbed wire fence, bears S. $89^{\circ}56'$ E. and N. $89^{\circ}56'$ W.

S. 89°56' W., beginning new measurement.

40.145

The cor. of secs. 22, 23, 26, and 27, monumented with an iron post, 2 ins. diam., firmly set, 3 ins. below the surface of the ground, with brass cap mkd. T7S R5E S22 S23 S27 S26 P I R 1928, witnessed by an iron pipe, 3 1/2 ins. diam., firmly set, projecting 9 ins. above ground, alongside the E. edge of cor., a wood post, 8 ins. diam., firmly set, projecting 14 ins. and leaning N., 1 lk. E. of cor., and a wood post, 6 ins. diam., firmly set, projecting 14 ins. above ground, 1 lk. N. of cor.

T	

from which

- A brass cap, 4 ins. diam., flush, in concrete cylinder, 14 ins. diam., projecting 5 ins. above ground for a reference monument, bears N. 88°07' E., 56.6 ft. dist. mkd. U. S. DEPARMENT OF THE INTERIOR B.M. BUREAU OF RECLAMATION UNLAWFUL TO DISTURB 7 5 133 ELEV FT . ABOVE MEAN SEA LEVEL 1982. From this brass cap, the same barbed wire fence bears N., 4.1 lks., bears N. 88°53' E. and S. 88°53' W.
- A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., projecting 1 in. above ground for a reference monument, bears S. 17°22' W., 144.5 ft. dist. mkd. CORPS OF ENGINEERS U.S. ARMY SURVEY MARK AA 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2323.

Add the marks 2017 to the brass cap.

From this cor., the same barbed wire fence, bears S., 0.8 lks., bears N. 89°36' E. and S. 89°36' W.

From the cor. of secs. 22, 23, 26, and 27.

S. $89^{\circ}28^{\circ}$ W., bet. secs. 22 and 27, along the N. bdy. of TON Reservation.

Over nearly level terrain, through scattering undergrowth and scattering mesquite, on/or alongside the same barbed wire fence.

39.56

The 1/4 sec. cor. of secs. 22 and 27, monumented with an iron post, 1 in. diam., firmly set, 6 ins. below the surface of the ground, with brass cap mkd.

1928

CHAINS

Remark the brass cap to read

T 7 S R 5 E
S 22
1/4 ——
S 27
P I R
2017
1928

Witnessed by an embedded mound of stone, 2 ft. base, N. of cor.

From this cor., the same barbed wire fence bears N., 0.5 lks., bears N. 89°10' E. and S. 89°10' W.

S. 89°30' W., beginning new measurement.

39.565

The cor. of secs. 21, 22, 27, and 28, monumented with an iron post, 2 ins. diam., firmly set, 6 ins. below the surface of the ground, with brass cap mkd. T7S R5E S21 S22 S28 S27 P I R 1928, with an open ended iron pipe, 1 1/2 ins. diam., firmly set, 5 ins. below the surface of the ground, 0.5 lk. N. of cor., an aluminum pipe 5/8 in. diam., projecting approximately 9 ft. above ground and a steel fence post, NW of cor.

Add the marks 2017 to the brass cap.

From this cor., the same barbed wire fence bears N., 1.4 lks., bears S. $89^{\circ}43'$ E. and N. $89^{\circ}43'$ W.

from which

- A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., flush with the surface of the ground for a reference monument, bears S. 60°44' E., 169.5 ft. dist. mkd. CORPS OF ENGINEERS U.S. ARMY SURVEY MARK Z 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2331.
- A rebar, 24 ins. long, 5/8 in. diam., set by me, flush with the surface of the ground for a reference monument, bears N. 11°03' W., 120.7 ft. dist.

From the cor. of secs. 21, 22, 27, and 28.

N. $89^{\circ}16^{\circ}$ W., bet. secs. 21 and 28, along the N. bdy. of TON Reservation.

Over nearly level terrain, through scattering undergrowth and scattering mesquite, on/or alongside the same barbed wire fence.

36.464

From this point, a local monument, bears S., 0.3 lks., established by Leonard J. Erie, Arizona R.L.S. No. 16529, in 2016, according to Fee No. 2016-009945, on file at Pinal County Recorder's Office, monumented with a rebar, 1/2 in. diam., firmly set, flush with the surface of the ground, with a plastic yellow cap, 1 in. diam., mkd. LS. 16529, with a 2 ft. lath, S. of rebar.

From this local monument, the same barbed wire fence bears N., 0.9 lks., bears S. 88°58' E. and N. 88°58' W.

41.21

The 1/4 sec. cor. of secs. 21 and 28, monumented with an iron post, 1 in. diam. firmly set, 24 ins. below the surface of the ground, with a brass cap mkd.

Found a steel fence post, 3 1/2 ft. long, firmly set, projecting 2 ins. above ground, N. of cor.

At the corner point

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 24 ins. in the ground, directly over the iron post, with brass cap mkd.

Deposit a magnet, in a white plastic case, alongside the iron post.

Reset the steel fence post, 3 1/2 ft. long, 27 ins. in the ground, N. of cor.

Set a steel fence post, S. of cor.

The cor. is located alongside the same barbed wire fence, 5 strand, bears S. 89°55' E. and N. 89°55' W.

CHAINS

From this cor. a rebar, 1/2 in. diam., firmly set, flush with the surface of the ground, with a portion of a plastic yellow cap, mkd. 4, established by William E. Nau, deceased, Arizona R.L.S. No. 9083, in 2000, according to Book 3 of Surveys, Page 428, on file at Pinal County Recorder's Office, bears S. 57°39' W., 0.4 lks. dist. I removed this rebar, and thence reset in the same place, and it is now projecting 2 in. above the ground and without the portion of the plastic yellow cap which disintegrated. This position was not utilized in the course of this resurvey.

S. 89°53' W., beginning new measurement.

40.12

The cor. of secs. 20, 21, 28, and 27, monumented with an iron post, 2 ins. diam., firmly set, projecting 14 ins. above ground, with a brass cap, mkd. T7S R5E S20 S21 S29 S28 P I R 1928, with a steel fence post, NE of cor., and a scattered mound of stone, S. of cor.

Add the marks 2017 to the brass cap.

Enclosed the iron post in a collar of stone, utilizing the stones of the scattered mound, 2 ft. base.

From this cor. from the same barbed wire fence, bears N., 0.2 lks., 4 strand, bears S. 89°50' E. and N. 89°50' W.

from which

- A brass cap, 4 ins. diam., flush, in concrete cylinder, 12 ins. diam., projecting 5 ins. above ground for a reference monument, bears S. 17°56' E., 63.5 ft. dist. mkd. U. S. DEPARMENT OF THE INTERIOR B.M. BUREAU OF RECLAMATION UNLAWFUL TO DISTURB 7 5 131 ELEV FT . ABOVE MEAN SEA LEVEL 1983, with a steel fence post, SE of brass cap.
- A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 8 ins. diam., projecting 11 in. above ground, for a reference monument, bears S. 35°23' W., 347.6 ft. dist. mkd. CORPS OF ENGINEERS U.S. ARMY SURVEY MARK Y 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms with portion of the concrete broken, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap, with a concrete cylinder, 2 ft. diam., loosely on the surface of the ground and S., NGS PID CZ2346.

From the cor. of secs. 20, 21, 28, and 27.

S. $89^{\circ}54^{\circ}$ W., bet. secs. 20 and 29, along the N. bdy. of TON Reservation.

CHAINS

Over nearly level terrain, through scattering undergrowth and scattering mesquite, on/or alongside the same barbed wire fence.

40.115

Point for the 1/4 sec. cor. of secs. 20 and 29, at proportionate dist., by the method of irregular boundary adjustment, there is no remaining evidence of the original cor.

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, underpinned with an alum. rod, 36 ins. long, 3/4 in. diam., 52 ins. in the ground, with brass cap mkd.

Deposit a magnet, in a white plastic case, at the base of the stainless steel post.

Set a steel fence post, W. of cor.

From this cor. the same barbed wire fence bears S., 0.8 lks., 4 strand, bears N. $89^{\circ}42'$ E. and S. $89^{\circ}42'$ W.

Cor. falls on edge of a wash, 2 ft. wide, 4 ft. deep, drains N.

From this cor. point, an iron post, 36 ins. long, 1 in. diam., filled with concrete, bent N. and S., projecting 5 ins. above ground, with brass cap mkd. "U.S. GENERAL LAND OFFICE SURVEY S20 4 S29 IR 1928", with a 2 ft. lath, S. of cor., reestablished by Leonard J. Erie, Arizona R.L.S. No. 16529, in 2016, according to Fee No. 2016-009945, that said "S 1/4 COR. SEC 20 T7S, R5E FOUND GLO BC LOCATED IN TREE (REMOVED). POSITION PRORATED BASED ON GLO PLAT OF T7S, R5E DATED 5-15-1930. ORIGINAL GLO MONUMENT WAS RESET", on file at Pinal County Recorder's Office, bears N. 0°54' W., 8.2 lks. dist. During a phone conversation with Mr. Erie, we agree that, I was going to replace this GLO iron post, with a rebar, to protect his location. In place of the iron post, I set a rebar, 24 ins. long, 5/8 in. diam., 22 ins. in the ground, set a steel fence post, W. of cor., reset the 2 ft. lath, S. of cor., and removed the iron post from the field. This position was not utilized in the course of this resurvey.

S. 89°53' W., beginning new measurement.

CHAINS

40.105

The cor. of secs. 19, 20, 29, and 30, monumented with a rebar, 5/8 in. diam., firmly set, 3 ins. below the surface of the ground, with a loosely attached aluminum cap, 2 ins. diam., mkd. "HANSEN ENGINEERING 520-723-3261 19 20 30 31 LS 17258", reestablished by Larry B. Hansen, Arizona R.L.S. No. 17258, date unknown, and accepted by Leonard J. Erie, Arizona R.L.S. No. 16529, in 2016, according to Fee No. 2016-009945, on file at Pinal County Recorder's Office. This is accepted as a careful and faithful reestablishment of the orig. cor. position.

At the corner point

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 25 ins. in the ground, directly over the rebar, with brass cap mkd.

Deposit a magnet, in a white plastic case, at the base of the stainless steel post and alongside the rebar.

Set a steel fence post, S. of cor.

From this cor. the same barbed wire fence bears N., 0.8 lks., 4 strand, bears N. $89^{\circ}51'$ E. and S. $89^{\circ}51'$ W.

from which

A brass cap, 3 1/2 ins. diam., flush in concrete cylinder, 2 ft. diam., projecting 4 ins. above the ground for a reference monument, bears S. 46°58' E., 221.6 ft. dist. mkd. CORPS OF ENGINEERS - U.S. ARMY SURVEY MARK X 50 STATION DESIGNATION YEAR 1966 AGENCY ARMY MAP SERVICE, at the center of a concrete aerial panel, with 4 arms, each being approximately 25 ft. long, and 16 ft. wide at the wide end, 2.6 ft. wide at the narrow end, and approximately 5 ft. from the brass cap. NGS PID CZ2354.

From the cor. of secs. 19 and 30 only, on the W. bdy. of ${\tt Tp.}$, hereinbefore described.

 $N.~89°56'\ E.,\ bet.\ secs.~19$ and 30, along the N.~bdy. of TON Reservation.

Over nearly level terrain, through scattering undergrowth and scattering mesquite, on/or alongside the same barbed wire fence.

CHAINS

38.897

The 1/4 sec. cor. of secs. 19 and 30, monumented with a rebar, 38 ins. long, 5/8 in. diam., firmly set, projecting 1 in. above ground, with an aluminum cap, 2 ins. diam., mkd. "HANSEN ENGINEERING 520-723-3261 19 30 LS 17258", reestablished by Larry B. Hansen, Arizona R.L.S. No. 17258, date unknown, and accepted by Thomas L. Rope, Arizona R.L.S. No. 21081, in 2015, according to Fee No. 2016-036989, on file at Pinal County Recorder's Office. This is accepted as a careful and faithful reestablishment of the orig. cor. position.

At the corner point

Set a stainless steel post, 28 ins. long, 2 1/2 ins. diam., 26 ins. in the ground, underpinned with the rebar, 38 ins. long, 5/8 in. diam., 51 ins. in the ground, with brass cap mkd.

Deposit a magnet, in a white plastic case, at the base of the stainless steel post and alongside the rebar.

Deposit the aluminum cap inside the stainless steel post.

Set a steel fence post, W. of cor.

From this cor., the same barbed wire fence bears N., 1 lk., 4 strand, bears N. $89^{\circ}51'$ E. and S. $89^{\circ}51'$ W.

N. 89°53' E., beginning new measurement.

40.145

The cor. of secs. 19, 20, 29, and 30, hereinbefore described.

GENERAL DESCRIPTION			
The lines resurveyed within T. 7 S., R. 5 E., are identical wi a portions of the north, east and west boundaries of the Toho O'odham Nation Reservation, and are located approximate 7.5 miles, S. 35° W., of Casa Grande, Arizona. The terrain vari from gently rolling to nearly level. The elevation ranges fr 1380 to 1455 ft. above sea level.			
Access to the area resurveyed is provided by Interstate Highw No. 8 and Thornton Road.			
The mean magnetic declination of 10 1/4° E. was derived from the United States Geological Survey computer program GEOMAG, utilizing the World Magnetic Model for Epoch 2015 for the dates of survey			
to the state of th			

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

FIELD ASSISTANTS

NAMES	CAPACITY
Craig S. Dukart	Cadastral Surveyor
Charles E. Besancon III	Surveying Technician
Robert W. Nash	Resource Dispatcher
£	

CERTIFICATE OF SURVEY

I, Blas J. Urena, Cadastral Surveyor, HEREBY CERTIFY upon honor, that in pursuance of special instructions bearing date of the 8th day of December, 2016, I have dependently resurveyed a portion of the North Boundary of the Tohono O'odham Nation Reservation (portions of the First Guide Meridian East [west boundary], the East Boundary and the subdivisional lines), T. 7 S., R. 5 E., of the Gila and Salt River Meridian, in the State of Arizona, which are represented in the foregoing field notes as having been executed by me and under my direction. Said survey has been made in strict conformity with said special instructions, the Manual of Surveying Instructions, (2009), and in specific manner described in the foregoing field notes.

(0/(1/2017	Blas J. Uhera (Cadastral Surveyor)
CERTIFICATE OF APPROVAL	
	BUREAU OF LAND MANAGEMENT Phoenix, Arizona
The foregoing field notes of the dependent Boundary of the Tohono O'odham Nation Reservation East [west boundary], the East Boundary], the East Boundary of East Boundary], the East Boundary of	rvation (portions of the First Guide undary and the subdivisional lines), an, in the State of Arizona, executed
CERTIFICATE OF TRANSCRIPT	
I CERTIFY That the foregoing transcript of the surveys in T. 7 S., R. 5 E., Gila and Salt copy of the original field notes.	

(Chief Cadastral Surveyor of Arizona)

(Date)